What is claimed is:

1. A method for driving a solid-state image pickup device which stores, in a plurality of photo-electric conversion units, signal charges corresponding to an incident light during a prescribed time period, excludes surplus charges by an electric potential barrier, reads out, after cutting off said incident light by a cut-off means such as a mechanical shutter, said signal charges by grouping said photo-electric conversion units into a prescribed number of regions, and outputs image signal from all of the photo-electric conversion units by repeating the read-out procedures, which comprises the steps of:

cutting off said incident light;

raising up said electric potential barrier;

starting reading out said signal charges.

2. The method for driving a solid-state image pickup device according to Claim 1, wherein the electric potential during the read-out step is raised up by a voltage greater than 0.4 V.

3. The method for driving a solid-state image pickup device according to Claim 1, wherein the electric potential during the read- out step is deeper than an adjacent electric potential which is applied, during the times except said read-out step, to said photo-electric conversion units which are adjacent to those which are being read out.

4. The method for driving a solid-state image pickup device according to Claim 3, wherein the potential difference between said electric potential during the read-out step and said adjacent electric potential is greater than 0.4 V.

5. The method for driving a solid-state image pickup device according to Claim 1, wherein each of said photo-electric conversion units is provided with a vertical overflow drain (OFD) structure which excludes the surplus charges by said electric potential barrier by a voltage applied to a substrate of said vertical OFD structure, which comprises the steps of:

cutting off said incident light;

raising up said electric potential barrier;

starting reading out said signal charges.

6. The method for driving a solid-state image pickup device according to Claim 5, wherein the electric potential during the read-out step is raised up by a voltage greater than 0.4 V.

7. The method for driving a solid-state image pickup device according to Claim 5, wherein the electric potential during the read- out step is deeper than an adjacent electric potential which is applied, during the times except said read-out step, to said photo-electric conversion units which are adjacent to those which are being read out.

8. The method for driving a solid-state image pickup device according to Claim 7, wherein the potential difference between   said electric potential during the read-out step and said adjacent electric potential is greater than 0.4 V.

9. The method for driving a solid-state image pickup device according to Claim 1, wherein each of said photo-electric conversion units is provided with a horizontal overflow drain (OFD) structure which excludes the surplus charges by said electric potential barrier by a voltage applied

to a gate of said horizontal OFD structure, which comprises the steps of:

cutting off said incident light;

raising up said electric potential barrier;

5     starting reading out said signal charges.

10. The method for driving a solid-state image pickup device according to Claim 9, wherein the electric potential during the read-out step is raised up by a voltage greater than 0.4 V.

10     11. The method for driving a solid-state image pickup device according to Claim 9, wherein the electric potential during the read- out step is deeper than an adjacent electric potential which is applied, during the times except said read-out step, to said photo-electric conversion units which

15     are adjacent to those which are being read out.

12. The method for driving a solid-state image pickup device according to Claim 11, wherein the potential difference between said electric potential during the read-out step and said adjacent electric potential is greater than

20     0.4 V.